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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,314	10/28/2003	Timothy J. Morscheck	02-TRN-178	4190

7590 01/14/2005  
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EXAMINER

LE, DAVID D

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/695,314	Applicant(s) MORSHECK, TIMOTHY J.	
	Examiner David D. Le	Art Unit 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/28/03, 03/03/04, 11/04/04.</u> | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This is the first Office action on the merits of Application No. 10/695314, filed on 28 October 2003. Claims 1-9 are pending.

### **Documents**

2. The following documents have been received and filed as part of the patent application:
  - Information Disclosure Statement, received on 10/28/03
  - Information Disclosure Statement, received on 03/03/04
  - Information Disclosure Statement, received on 11/04/04

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it has exceeded 150 words.

Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S.**

**Patent No. 5,643,121 to Greenwood et al. in view of WO 02/057107 A1.**

**Claims 1-5:**

***Greenwood*** (i.e., Figs. 1-3; column 2, line 23 – column 4, line 26) discloses a continuously variable ratio transmission comprising:

- A gear unit (i.e., Fig. 1, being the combination of gear trains 35-37) having gears providing a plurality of selectively engaged gear ratios and the gear unit having a gear unit input shaft (i.e., Fig. 1, being any one of shafts 13-15) and a gear unit output shaft (i.e., Fig. 1, being shaft 38);

- A variator (20) having a variator input shaft (19) and a variator output shaft (22) and configured to continuously vary a ratio of input torque to output torque between the variator shafts, the variator output shaft drivingly connected to the gear unit input shaft;
- An input gear set (3) drivingly connected to the variator input shaft;
- An input fixed ratio element (18) configured to reduce the torque from the input gear set to the variator and operably disposed between the input gear set and the variator input shaft;
- An output fixed ratio element (24) configured to increase the torque from the variator and operably disposed between the variator output shaft and the gear unit input shaft;
- Wherein the input gear set is a planetary mixer gear set including a ring gear, a sun gear, and a carrier retaining a plurality of planet gears disposed between the ring gear and the sun gear with at least one of the ring gear the sun gear and the carrier drivingly connected to the variator input shaft (see Fig. 1);
- Wherein the ring gear of the planetary mixer gear set is fixed to a mixer input shaft (2), the sun gear of the planetary mixer gear set is drivingly connected to the variator output shaft, and the carrier of the planetary mixer gear set is fixed to a mixer output shaft (13), which is drivingly connected to the gear unit input shaft (see Fig. 1); and
- Wherein the gear ratios of the gear unit are gathered gear ratios (see Fig. 1).

*Greenwood* does not explicitly disclose an electronic control unit configured to include logic rules for controlling a transmission, including issuing transmission control commands.

*WO 02/057107 A1* (i.e., Fig. 6; page 6, line 5 – page 12, line 14), on the other hand, teaches an electronic control unit (T-ECU 22) configured to include logic rules for controlling a transmission, including issuing transmission control commands.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify *Greenwood* to include an electronic control unit such as the control unit T-ECU 22, in view of *WO 02/057107 A1*, in order to improve the fuel consumption and drivability of the continuously variable transmission.

***Allowable Subject Matter***

7. Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Haka (U. S. Patent No. 6,447,422) teaches a power train as shown in Figs. 1-4.
- Doyle et al. (U. S. Patent No. 4,936,165) teaches a variable speed transmission assembly as shown in Figs. 2-4.
- Sakakibara et al. (U. S. Patent No. 4,864,889) teaches a belt driven continuously variable transmission as shown in Fig. 1.
- Larkin (U. S. Patent No. 5,980,414) teaches a multi-range, belt-type, continuously variable transmission as shown in Figs. 1-14.
- JP360196463A teaches a continuously variable transmission gear as shown in Fig. 1.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 703-305-3690 or 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 703-308-0830 or 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
ddl

  
**CHARLES A MARMOR**  
SUPERVISOR PATENT EXAMINER  
ART 3681